a1 cont

acquiring a speech signal;

performing a probabilistic search using the speech signal as an input, and using the grammar and the subgrammars as possible inputs; and

allocating memory for less than all of said elements of one of the subgrammars when a transition to that subgrammar is made during the probabilistic search.

11. In a speech recognition system, a method for recognizing speech comprising the steps of:

a2 acquiring a first set of data structures that contain a grammar, a word subgrammar, a phone subgrammar and a state subgrammar, each of the subgrammars related to the grammar, wherein each of said subgrammers contains a plurality of elements;

acquiring a speech signal;

performing a probabilistic search using the speech signal as an input, and using the grammar and the subgrammars as possible inputs;

allocating memory for less than all of said elements of one of the subgrammars when a transition to that subgrammar is made during the probabilistic search; and

computing a probability of a match between the speech signal and an element of the subgrammar for which memory has been allocated.

18. In a speech recognition system, a method for recognizing speech comprising the steps of:

a3 acquiring a first set of data structures that contain a top level grammar and a plurality subgrammars, each of the subgrammars hierarchically related to the grammar and to each other, wherein each of said subgrammers contains a plurality of elements;

acquiring a speech signal;

performing a probabilistic search using the speech signal as an input, and using the top level grammar and the subgrammars as possible inputs;

allocating memory for less than all of said elements of specific subgrammars when transitions to those specific subgrammars are made during the probabilistic search; and

computing probabilities of matches between the speech signal and elements of the subgrammars for which memory has been allocated.